

Appl. No. 10/626,976
Attorney Docket No.: 2002B105A
Amdt. dated December 12, 2005
Reply to OA of September 12, 2005

REMARKS/ARGUMENTS

The Invention

The present invention is directed generally to silane crosslinked or crosslinkable polymers. More particularly, the invention is directed to copolymers comprising ethylene and C₃ to C₁₂ alpha-olefin comonomers in combination with silane grafting compositions to provide crosslinked or crosslinkable compositions for use in a variety of applications.

Status of the Claims

Claims 1 through 11 and 13 through 36 are currently pending in the present application. Claim 1 is amended herein to incorporate the subject matter of claim 12, namely that the claimed polymer composition further comprises a silanol condensation catalyst. Claim 12 has accordingly been cancelled. Applicant submits that no new matter has been added by way of the present amendment.

Claims 15 through 36 were withdrawn from examination in the paper filed on July 26, 2005.

Discussion of the Instant Claim Rejections

Claims 1 through 14 stand rejected under 35 USC §102(b) or, in the alternative, 35 USC §103(a) in light of U.S. Patent No. 6,316,512 ("Bambara"). The Examiner stated with respect to Bambara that, "[r]eference to Bambara et al specifically teaches the same polyolefins with the silane grafting, and the composition to produce the grafted product... Any properties not specifically disclosed in the reference, therefore, would reasonably be presumed to be present absent evidence to the contrary." (Official Action at page 2.)

Bambara does not, however, teach or disclose the use of a silanol condensation catalyst in conjunction with a polyethylene/alpha-olefin copolymer having a CDBI of at least 70%, a melt index I_{2.16} of from 0.1 to 15 g/10 min, a density of from 0.910 to 0.940 g/cm³, a melt index ratio I_{21.6}/I_{2.16} of from 30 to 80, and an Mw/Mn ratio of from 2.5 to 5.5 and a silane grafting composition, as presently claimed. Because Bambara does not expressly or inherently describe each and every element as set forth in the pending claims, anticipation under 35 USC §102(b)

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does not exist. *See* MPEP §2131. Applicant therefore respectfully requests withdrawal of the present claim rejections under §102(b).

The pending claims are likewise not rendered obvious by Bambara under 35 USC §103(a). Rather, Bambara specifically teaches away from the use of a silanol condensation catalyst, instead teaching the desirability of slow silane-grafted materials for use in foamed polyolefin applications. For example, Bambara states that “[t]ypically the silane cross-linked polymer industry has focused on faster processing cycles utilizing catalysts to affect rapid cross-linking of polyolefins []. By utilizing a much slower cross-linking mechanism, higher silane levels can be obtained for cross-linking while maintaining the feasibility to produce foam.” (Bambara at col. 14, lines 27-34.) Bambara further explains, “[a]lthough previous silane-grafted polyolefins required the presence of a catalyst to have effective cross-linking, the catalyst is no longer required in systems that use VTEOS as the hydrolysable silane” (*id.* at col. 5, lines 63-67) and “slow silane-grafts materials allow for the reduction or omission of hydrolysis catalysts from the cross-linking system.” (*id.* at col. 21, lines 47-49.)

Bambara does not disclose or suggest a composition comprising a polyethylene/alpha-olefin copolymer having a CDBI of at least 70%, a melt index $I_{2.16}$ of from 0.1 to 15 g/10 min, a density of from 0.910 to 0.940 g/cm³, a melt index ratio $I_{2.16}/I_{1.6}$ of from 30 to 80, and an Mw/Mn ratio of from 2.5 to 5.5; a silane grafting composition; and a silanol condensation catalyst, and teaches away from the use of a condensation catalyst throughout the disclosure. As a result, Bambara does not render the presently pending claims obvious under 35 USC §103(a), because, when considered as a whole, Bambara includes teachings that lead away from the claimed invention and therefore does not suggest the desirability or obviousness of making the claimed combination. *See* MPEP §§2141, 2141.02. Accordingly, Applicant also respectfully requests withdrawal of the rejection of the pending claims under 35 USC §103(a).

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CONCLUSION

Applicant believes that the preceding amendments and comments fully address the outstanding rejections and place the application in condition for allowance. Accordingly, an early and favorable response is respectfully requested.

Should any issues remain unresolved by this submission, the Examiner is invited to contact the Applicant's representative using the contact information below.

Respectfully submitted,

Date: 12/12/05

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